ABSTRACT

A fine channel device for performing a chemical treatment or for producing fine particles, having the degree of integration of fine particles two-dimensionally and three-dimensionally and capable of supplying a liquid to all of the fine channels evenly and producing products in a large quantity, is provided, and a small-sized chemical plant capable of achieving a production quantity comparable to a conventional large-scale chemical plant comprising the fine channel device as a fundamental constituent factor, is provided.

A fine channel device introducing at least one fluid and having fine channels for performing a chemical treatment for the fluid introduced and for producing particles from the fluid introduced, the fine channel device having a storage space for temporarily storing the introduced fluid having a shape of a circular or a polygonal recess, and supply channels of a linear and/or a curved shape formed in a radial direction from the storage space, wherein the fine channels are communicated with each of the fine channels of the fine channel substrate having the fine channels, is used. A small sized desksize chemical plant comprising a plurality of the fine channel devices as fundamental constituents, means for supplying at least one fluid to the plurality of fine channel devices, and means for recovering products produced by performing a chemical treatment of

above fluid or particles produced from the above fluid in the plurality of fine channel devices, is used.